

Appl. No. 09/936,119
Amdt. dated Oct. 3, 2003
Reply to Office Action of Aug. 22, 2003

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1 - 27 (Canceled)

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28. (Previously Added) A gelled composition for use in agriculture, public health or domestic hygiene, characterized in that it comprises at least one active substance and at least one gellable dendrimer; wherein said dendrimer comprises a core, a plurality of branches linked to the core and terminal groups linked directly or indirectly through a connector to branches; and wherein said gelled composition is in the form of a pulverulent composition or a gel.

29. (Previously Added) The composition claimed in claim 28, characterized in that the active substance is at least one material selected from the group consisting of herbicides, fungicides, insecticides, acaricides, rodenticides, nematocides, repellants and plant growth regulators.

30. (Previously Added) The composition as claimed in claim 29, characterized in that it is in the form of a pulverulent composition.

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31. (Previously Added) The composition as claimed in claim 28, characterized in that it contains a quantity of liquid carrier which is insufficient to convert said pulverulent composition into a gel.

32. (Previously Added) The pulverulent composition as claimed in claim 28, characterized in that the quantity of active substance(s) is between 2 and 99.99% and the quantity of dendrimer of between 0.01 and 99.5% by weight.

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33. (Previously Added) The pulverulent composition as claimed in claim 32, characterized in that the quantity of active substance(s) is between 5 and 95% by weight and the quantity of dendrimer of between 0.5 and 50% by weight.

34. (Canceled)

35. (Previously Added) The composition as claimed in claim 28, characterized in that it contains a liquid carrier and is in the form of a gel.

36. (Previously Added) The composition as claimed in claim 35, characterized in that the amount of active substance(s) present is between 0.5 and 99.99% and the amount of dendrimer of between 0.028 and 99.5% by weight.

37. (Previously Added) The composition as claimed in claim 35, characterized in that the gellable dendrimer is such that when mixed with or solubilized in water in respective proportions by weight of 28.5/98.5, at a temperature of about 65° C, forms after 48 hours, a gelled product which does not flow when it is placed in the form of a cubic mass on a flat surface.

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38. (Previously Added) The composition as claimed in claim 35, characterized in that the active substance(s) is (are) present in a quantity of between 5 and 70% by weight, and the dendrimer is such that when mixed with or solubilized in water in respective proportions by weight of 28/28 at room temperature forms, after two weeks, a gelled product which does not flow when it is placed in the form of a cubic mass on a flat surface.

39. (Previously Added) The composition as claimed in claim 35, characterized in that the dendrimer is such that after mixing with or solubilizing in water in respective proportions by weight of 28.8/98.2 at a temperature between 40 and 65° C and is then heated for 4 weeks at a temperature of about 60-65° C, forms a gelled product which does not flow when it is placed in the form of a cubic mass on a flat surface.

40. (Previously Added) The composition as claimed in claim 35, characterized in that the dendrimer is a neutral dendrimer having terminal groups selected from the group consisting of carboxylic acid, phosphonic acid, sulfonic acid, sulfonate, sulfate and amine groups, or is an ionic

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dendrimer having terminal groups selected from the group consisting of carboxylate, sulfonium, phosphonium, amidinium, guanidinium and ammonium groups.

41. (Previously Added) The composition as claimed in claim 35, characterized in that the dendrimer is ionic and has terminal groups selected from the group consisting of secondary, tertiary or quaternary ammonium or pyridinium groups.

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42. (Previously Added) The composition as claimed in claim 35, characterized in that the dendrimer connector comprises a 2 to 50 atom, optionally substituted, optionally heteroatom-containing, hydrocarbon radical.

43. (Canceled)

44. (Previously Added) The composition as claimed in claim 35, characterized in that the dendrimer has between 20 and 20,000 phosphorus to nitrogen bonds.

45. (Previously Added) The composition as claimed in claim 35, characterized in that the dendrimer core comprises a 1 to 30 atom hydrocarbon moiety which optionally contains at least one heteroatom selected from the group consisting of oxygen, sulfur, nitrogen, phosphorus and halogen, a hexachlorocyclotriphosphazene moiety or a trichlorothiophosphane moiety.

46. (Previously Added) The composition as claimed in claim 35, characterized in that the dendrimer branches comprise hydrocarbon radicals which optionally contain at least one heteroatom selected from the group consisting of oxygen, sulfur, nitrogen, phosphorus and halogen.

47. (Previously Added) The composition as claimed in claim 35, characterized in that at least 10 % of the dendrimer branches have the same chemical motif in that they are composed of the same elements and have the same type of unsaturation or lack thereof.

48. (Previously Added) The composition as claimed in claim 35, characterized in that the gelled dendrimer has at least one insertion volume selected from the group consisting of

- an inner cavity defined by the dendrimer branches having a size between 0.001 and 30 nm³; and

- an interstitial space of the three-dimensional structure of the gel having a size between 0.0005 and 50 μm³.

49. (Previously Added) The composition as claimed in claim 48, characterized in that it comprises between 0.1 and 60% by weight of gellable dendrimer having at least one insertion volume selected from the group consisting of

- an inner cavity having a size between 0.01 and 10 nm³; and

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- an interstitial space of the three-dimensional structure of the gel having a size between 0.001 and 20 μm^3 .

50. (Previously Added) The composition as claimed in claim 48, characterized in that at least half of the active substance(s) is(are) contained in the interstitial spaces of the three-dimensional structure of the gel.

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51. (Previously Added) The composition as claimed in claim 35, characterized in that the liquid carrier comprises water or at least one organic solvent and the quantity of carrier is between 0 and 99% by weight.

52. (Previously Added) The composition as claimed in claim 35, characterized in that at least 50% of the active substance is releasable therefrom.

53. (Previously Added) The composition as claimed in claim 52, characterized in that at least 80% of the active substance is releasable therefrom.

54. (Previously Added) A method for preparing a composition as claimed in claim 35, characterized in that it comprises

- a) solubilizing a mixture comprising said at least one active substance, at least one gellable dendrimer and liquid carrier; and
- b) heating said mixture for 0.25 to 45 days at a temperature of about 60-65° C.

55. (Previously Added) A method for the preparation of a pulverulent material, characterized in that it comprises providing a composition as claimed in claim 35, and at least partially removing the carrier therefrom.

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56. (Previously Added) A method for the preparation of a pulverulent material according to claim 55, characterized in that the composition from which at least part of the carrier has been removed is ground.

57. (Previously Added) A pulverulent material obtained according to the process of claim 55.

58. (Previously Added) A method of treatment or protection of a surface by applying a composition to the surface characterized in that a composition as claimed in claim 28 is applied to the surface in an amount between 0.1 and 200 g/m² of surface.

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59. (Currently Amended) A method for treatment or protection of crops by applying a composition to the situs ~~thereof~~ of said crops, characterized by utilizing the composition of claim 35.

60. (Currently Amended) A method for treatment or protection of crops by applying a composition to the situs ~~thereof~~ of said crops, characterized by utilizing the composition of claim 28.

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61. (Re-presented - formerly dependent claim 43) A gelled composition for use in agriculture, public health or domestic hygiene, characterized in that it comprises at least one active substance and at least one gellable dendrimer; wherein said dendrimer comprises a core, a plurality of branches linked to the core and terminal groups linked directly or indirectly through a connector to branches and has between 2 and 80,000 bonds between atoms of group V A of the periodic table of chemical elements; wherein said gelled composition is in the form of a gel and contains a liquid carrier.

62. (Re-presented - formerly dependent claim 34) A gelled composition for use in agriculture, public health or domestic hygiene, characterized in that it comprises at least one active substance selected from the group consisting of herbicides, fungicides, insecticides, acaricides, rodenticides, nematocides, repellents and plant growth regulators and at least one gellable dendrimer; wherein

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could* said dendrimer comprises a core, a plurality of branches linked to the core and terminal groups linked directly or indirectly through a connector to branches; and wherein said gelled composition is in the form of a pulverulent composition; and wherein at least 50% of the active substance is releasable from said pulverulent composition.
